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DUPONT OIL BLUE A: A FIELD STUDY REPORT WITH NORTHERN POCKET GOPHERS

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Abstract: To determine why a large percentage of pocket gophers survived following the underground application of strychnine alkaloid baits, personnel of the Denver Wildlife Research Center designed a field study to determine the number of northern pocket gophers (*Thomomys talpoides*) marked after application of a grain bait containing a bio-marker (DuPont oil blue A). Pocket gophers ingesting this biomarker bait would have their subcutaneous fat dyed blue. Two treatment units were established in an alfalfa-grass hay pasture; one unit received the 1.6% DuPont oil blue A oat groat bait and the second unit received a sham treated oat groat bait. Both baits were applied underground at all active pocket gopher mounds or feeder plugs on their respective treatment units. Five days posttreatment each bait spot was reopened and examined for the presence or absence of the bait. On the 1.6% treatment unit, pocket gophers removed 30 (94%) of the 32 bait sites, whereas two bait spots remained intact. For 18 bait sites on the 0.0% treatment unit, pocket gophers removed all the bait (100%). After examining each bait site, pocket gophers were then kill-trapped, and examined for the blue dye. Only 7 (35%) of the 20 pocket gophers trapped on the 1.6% treatment unit had subcutaneous fat dyed blue. All 8 animals trapped on the control treatment unit were negative for the blue dye in the subcutaneous fat. The data suggest that the pocket gophers removed the bait from the bait sites, but only 35% of these animals actually consumed the bait. This low bait consumption may be seasonal, in that during the growing season pocket gophers prefer the green alfalfa vegetation over the grain bait. Therefore, additional testing of bait acceptance should be repeated in the alfalfa-grass hay pasture during the non-growing season.